Framing Food Insecurity

Food security means assured access to sufficient food for a healthy and active life. Food security includes at a minimum the ready availability of nutritionally adequate and safe foods and the assured ability to acquire acceptable foods in socially acceptable ways. Food Security in the U.S. is measured by the USDA utilizing an 18-question survey. Each question specifies the period (last 12 months) and specifies lack of resources for the behavior or experience.

U.S. prevalence of food insecurity is greater in households with:

- Children (19.5%)
- Children under age 6 (20.9%)
- Children headed by a single women (34.4%)
- Children headed by a single man (23.1%)
- Black, non-Hispanic households (26.1%)
- Hispanic households (23.7%)
- Low-income households with income below 185% of federal poverty level (34.8%)

Moving Upstream – Addressing the Social Determinants of Health

Health inequities are avoidable inequalities in health between groups of people. Social and economic conditions and their effects on people’s lives determine their risk of illness and the actions taken to prevent them from becoming ill or in treating illness when it occurs (WHO). These social and economic conditions that influence health are known as the social determinants of health – where we are born, grow, live, learn, work, and age. The County Health Rankings Framework estimates that approximately 50% of health factors are attributed the social determinants of health. Given that health is transmitted by social factors across generations, to make the greatest impact on population health, we need to move upstream to close the gap on inequities and address the root causes of health.
Effects of Food Insecurity on Child Health

Food insecurity in households with children has been associated with a number of negative effects on child’s health:

**Obesity**

Several recent review studies analyzed associations between food insecurity and child weight status, finding inconclusive evidence of association. Important mediators of this relationship may be gender, maternal weight status, stressors, and federal food program participation.


Select findings of individual studies:

- Children in food insecure households had greater risk for overweight BMI for 12-17 y/o, girls, white, and in households with income <FPL. NHANES 99-02 (Casey et al., 2006)
- Among 3-10 y/o, food insecurity and maternal stressors significantly linked to probability of being overweight. No association from 11-17 y/o. NHANES 99-02 (Gunderson et al., 2008)
- Food insecurity indirectly influenced 2 y/o overweight through parenting practices and infant feeding (Bronte-Tinkew et al, 2007)
- No associations found (Bhargava et al., 2008; Bhattacharya, et al., 2004; Feinberg., 2008; Gunderson et al., 2008; Gunderson et al., 2009; Kaiser et al., 2002; Martin et al., 2007; Rose et al, 2006)

Relevant citations:


Gundersen, Craig, Steven Garasky, and Brenda J. Lohman. "Food Insecurity Is Not Associated with Childhood Obesity as Assessed Using Multiple Measures of Obesity." *The Journal of Nutrition* 139, no. 6 (June 1, 2009): 1173–78.


Rose, D. "Household Food Insecurity and Overweight Status in Young School Children: Results From the Early Childhood Longitudinal Study." *PEDIATRICS* 117, no. 2 (February 1, 2006): 464–73.
The Food Research Action Center has conducted an extensive review of the linkages of food insecurity, poverty, and obesity. Read more at: http://frac.org/initiatives/hunger-and-obesity/are-hunger-and-obesity-related/

**Asthma**

There is limited research to study the relationship between food insecurity in households with children to asthma – the one cited study was conducted in Brazil. A more popular area of research, and yet limited, appears to be looking at the effect on asthma as a result of nutrient deficiencies (a possible health outcome of food insecurity), in particular, Vitamin D. The broader context around asthma morbidity as it relates to food insecurity is likely tied to other shared risk factors such as socioeconomic status, and race/ethnicity, which may in turn influence where people live, learn, work and play.

Relevant citations:


**Mental Health**

Food insecurity in households with children is associated with mental health outcomes in children. Associations between child hunger and mental health include increased reports of anxiety/depression, higher levels of internalizing behavior problems, and hyperactivity/inattention. Some studies have also found increased risk for thoughts of death (dysthymia) and suicide attempts among food insufficient adolescents.

Relevant citations:

Addressing Food Insecurity and the Social Determinants of Health in the Clinic Setting

Increasingly the medical community is recognizing the need to address the broader social determinants of health at well childcare visits and other preventative health visits. Summarized below are several studies that provide rationale for screening for social determinants of health, such as food insecurity and describe and test the process for implementation of screening and intervention implementation in the clinic setting. Also referenced are examples of provider education efforts.

Screening


The American Academy of Pediatrics Task Force on the Family in 2003 recommended extending the responsibilities of the pediatric provider to include screening, assessment, and referral of parents for social problems that “can adversely affect the health and emotional or social well-being of their child.”


Cross-sectional study with goals to: describe prevalence of 5 basic social needs of parents with children ages 2-10 years attending urban hospital-based pediatric clinic (Baltimore); assess parental attitudes toward seeking assistance from child’s provider; examine resident providers’ attitudes and behaviors toward addressing those needs. Most common reported needs among parents (n=100) were: employment (52%), education (34%), childcare (19%), food (16%), and housing (10). Sixty-seven percent of parents expressed positive attitudes toward requesting assistance from their child’s pediatrician.

Randomized controlled trial at 8 urban community health centers to evaluate effectiveness of clinic-based screening and referral system on families’ receipt of community-based resources for unmet basic needs. Families receiving screening and referral were more likely to receive referral for support and to enroll in community resource.


A case study summary of three approaches to using electronic medical records to address the social determinants of health in clinical settings. Multiple functions that electronic medical records can play to integrate social determinants of health into healthcare delivery settings were identified and include: screening, triaging, referring, tracking, and data sharing.


A 2-question screening tool for food insecurity was developed and has shown to be sensitive, specific and valid among low-income families with young children. Additional testing across socioeconomic levels and rural populations is suggested.

**Clinic-based interventions**


In this national survey of primary care providers and pediatricians, 85 percent believe that unmet social needs—things like access to nutritious food, reliable transportation and adequate housing—are leading directly to worse health for all Americans. Furthermore, 4 in 5 physicians do not feel confident in their capacity to meet their patients’ social needs, and they believe this impedes their ability to provide quality care. *Within the current health care system, physicians do not have the time or sufficient staff support to address patients’ social needs.*


Pediatricians at an academic primary care clinic worked with community partners to link food insecure families with infants to supplementary infant formula, educational materials, and clinic and community resources and referrals. Families that received services and information were more likely to have completed a lead test and developmental screen; more likely to have
received a full set of well infant visits by 14 months; and more likely to have been referred to social work.


Small pilot in urban academic-based clinic in Baltimore, MD to assist healthcare providers in educating families about available community-based resources. The pilot took place over the course of 6 weeks. At-risk families were connected to a Family Help Desk and subsequently referred to community resources. Only 6% (n=59) of parents accessed the help desk. Social needs reported included afterschool programs and childcare (29%), employment (13%), housing (12%) and food (11%). Most parents utilizing the help desk contacted a community resource within 6 months of their visit - 32% enrolled in community programs.

Provider education


Assessment of impact of training for pediatric residents on implementation of screening and referral intervention for addressing patient social needs. Training curriculum included videotaped vignettes of screening for social determinants of health and a “day in the life” series of families describing the impact of intervention on their lives. Residents completed pre-post self-assessments measure their perceptions of competence and resource knowledge. Patients also assessed provider level of trust and respect for the resident and the number of social determinants screen for. Referral rates and resource distribution was measured. Training increased competence of providers and significantly increased screening for social determinants of health as well as referral rates compared to control group.